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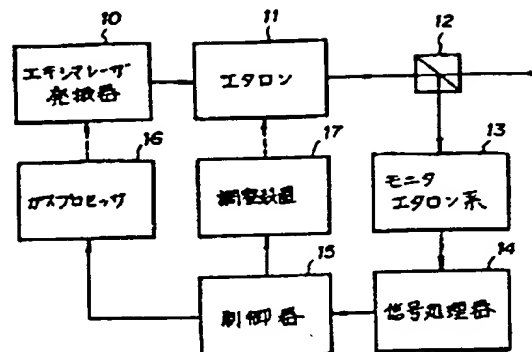
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TITLE : CONTROLLING METHOD FOR
WAVELENGTH OF LASER LIGHT



ABSTRACT : **PURPOSE:** To control the wavelength of a laser light beam without using a spectroscope by making part of oscillated laser light beams fall on an optical means of forming interference fringes, and by changing the wavelength of the oscillated laser light beams so that the position of the interference fringes be coincident with a position relevant to a target wavelength.

CONSTITUTION: An excimer laser oscillator 10 oscillates laser light beams having a wavelength of an ultraviolet area, and an etalon, one of wavelength selecting means, allows only laser light beams of specified wavelength to pass through, while a beam splitter 12 splits incident laser light beams, leading one of them to a main use and the other to a monitor etalon system 13. Interference fringes are formed on a detecting plane, and a line image sensor 13c supplies a signal processor 14 with informations on the position and intervals of these interference fringes. The signal processor 14 compares a found wavelength with a target wavelength and delivers a control signal to a controller 15 so as to make the oscillated wavelength coincide with the target wavelength. The controller 15 gives a control to a gas processor 16 or an adjusting unit 17 or to both of them.

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